

ABSTRACT

A medical probe assembly and method are provided for ablating tissue. The probe assembly comprises an elongated shaft and an electrode array mechanically coupled to the distal end of the shaft. The electrode array is configured to assume an outwardly curved shape, when exposed to a first temperature, and assume a pointed tip when exposed to a  
5 second temperature less than the first temperature. The first temperature is preferably greater than body temperature, e.g., equal to the tissue ablation temperature, and the second temperature is preferably less than a tissue ablation temperature, e.g., body temperature. In this manner, the pointed tip assumed by the electrode array facilitates  
10 introduction of the probe assembly through the tissue prior to the ablation process, while the outwardly curved shape assumed by the electrode array facilitates deployment of the electrode array within the tissue during the ablation process. The exposed needle electrodes also facilitate the visualization of the probe assembly under fluoroscopy. The probe assembly comprises an optional deployment member, which is configured to linearly  
15 expand when exposed to a third temperature, thereby displacing the electrode array.